

Newsletter for Birdwatchers

VOL. XXXI

No. 9 & 10

September - October 1991



ASIAN WETLAND CENSUS 1991

excerpts from the report compiled by
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published by IWRB, Slimbridge, U.K.

INTRODUCTION AND DEVELOPMENTS

We are now at the end of the first 5-year period of existence of the Asian Waterfowl Census (AWC), which was established in 1987 in response to the destruction and degradation of wetlands in Asia, and the subsequent reported decline of waterfowl populations. Five years have lead the AWC into maturity, and it is now time to review its achievements, and also to plan carefully the next 5-year period so that the exercise yields the maximum benefit for the conservation of waterfowl and wetlands in Asia, which is its ultimate goal.

The specific aims of the Census can now be described as :

- to provide a long-term system for monitoring Asian waterfowl, so as to detect large-scale trends in populations, changes in species distribution, main sites for species, factors governing waterfowl distribution etc...
- to provide a long-term system for monitoring Asian wetlands, using birds as bio-indicators;
- to identify threatened species and sites, in order to stimulate priority action (research and conservation) on these;
- to provide up-to-date information on waterfowl populations and wetlands to the international agencies and conventions dealing with their conservation.

More generally, the Census also serves to encourage a greater interest in wetlands and waterfowl amongst government, non- governmental and private individuals, and thereby promote the conservation of wetlands in Asia.

Waterfowl and the Gulf conflict

The Gulf conflict in early 1991 is likely to have serious effects on waterfowl populations in the Gulf and their wetland habitats. Thousands of birds, possibly many more, are reported to have died by being oiled. The conflict may have more long-term effects on waterfowl and wetlands than just the birds killed by the oil slick, since the pollution from the burning oil wells is likely to fall down onto wetlands in various neighbouring countries.

General Results : Wetlands of International Importance

The total number of waterfowl recorded at a specific wetland is a very useful index of its importance, upon which the Ramsar Convention has long been basing its designation criteria.

In 1991, 69 wetlands were recorded to hold over 20,000 waterfowl and thus qualified as of international importance; among these, 15 are in Pakistan, 11 in Iran, and 10 each in USSR (Central Asia) and India. Out of these 69 wetlands, 12 held over 100,000 waterfowl (4 in USSR, 3 in Iran) and were particularly outstanding; 4 of these are Ramsar sites.

For the Attention of Counters

After the first years of initial growth, the AWC now encompasses a large range of countries and a great number of wetlands. In order for the Census to reach maturity, the cooperation of everyone will continue to be fundamental, but in some countries the priorities will change.

Counting important sites

From the 5 annual reports on the AWC so far published, one can get an idea on the most important wetlands in any particular country, for example all those that have held at least once 10,000 waterfowl or more.

The priority now lies with **Counting These on a Regular Basis**, since the objectives of the AWC cannot be met without them. It is clear that various problems exist : the size of these wetlands, the lack of telescopes to count them, the unfamiliarity of many participants with counting large numbers (tens of thousands) etc... Some of these can be overcome by an improved local coordination, so as to have several teams covering simultaneously different sections of a wetland. Training courses for counters can also help a lot, and National Coordinators are encouraged to organize some. IWRB and AWB will be very glad to assist them in this task.

Coverage

As mentioned in the introduction, trend analyses are vital in order to detect threatened waterfowl species/populations or wetlands. It is **only** by counting the **same** sample of sites every year that long-term trends can be detected.

Therefore, please note that in most countries, the emphasis should **No longer** be to count as many wetlands as possible; the goal should now be to try and count **Yearly** the same wetlands, especially those already counted in the past and the most important ones. This does not mean necessarily counting all the 3000+ recorded so far. A representative sample of wetlands counted annually can in many countries be sufficient to record most of the waterbirds. For example, the Indian section shows that counting only 24% of the wetlands visited in 1991 would have been sufficient to record 92% of the birds counted in the whole country.

Quality of data

Although the counts alone are very important information, they are much more valuable if they are transmitted together with site information on the green form, which has to be filled **only** the first time a wetland is counted. On this form, the **Geographic Coordinates** are the most useful piece of information; they will allow the results of the counts to be plotted on maps; they enable IWRB to work out a sitecode which assists the storage and retrieval of the count information, and they prevent mistakes being made through duplication.

For example, for over 1000 of the 1,600 wetlands so far counted in India, IWRB never received any green form and has no coordinates. Therefore, the data is much less useful than it could be, and will be impossible to plot on maps at the site level. It would be good to improve this, as IWRB aims to add maps to the annual reports in future years.

(contd. on back inside cover)

Table 1 : Overview of the Asian Waterfowl Census during the period 1987-1991

	Number of Sites Counted					Number of participants				
	1987	1988	1989	1990	1991	1987	1988	1989	1990	1991
SOUTH ASIA										
Bangladesh	8	12	12	19	35	4	11	10	7	25
Bhutan	0	2	4	0	0	-	1	3	-	-
India	189	326	650	655	816	121	180	282	318	300+
Nepal	12	10	2	11	8	18	8	15	18	18
Pakistan	67	147	190	140	176	18	17	18	21	13
Sri Lanka	67	101	109	115	106	15	17	29	26	35

CONTENTS

Editorial

- Asian Mid-winter Waterfowl Census
- The California Condor
- The Narcondom Hornbill
- Dealing with Crows
- Yellowthroated Bulbuls
- Untidy Manuscripts

Articles

- Common Baya Weaver Bird – Nest Building Habits, by Prof. Dinesh Mohan
- Ranganathittu : Flood Havoc and Aftermath, by S. Subramanya, S. Karthikeyan and J.N. Prasad
- Avifauna of Chinnar Wildlife Sanctuary, by Nameer, P.O. and Suman Jacob George
- Notes on the Indian Shag, Avocet, and a Little Egret, by V. Santharam
- 2 Chicks are the future for U.S. Condor, by Robert Reinhold

Correspondence

- The Rann of Kutch in Pakistan, by Inayat Chaudhry
- Sighting of Siberian Crane in the Little Rann of Kutch, by Dhanraj Malik
- Cases of Albinism in House and Jungle Crows, by Anil Mahabal
- An Appeal, by Dr. Kumar Ghorpade
- Disaster at Ranganthittu, by V. Ganapathi
- Great Hornbills near Dandeli, by C.S. Nagendran
- House Sparrow in Unusual Plumages, by Kumaran Sathasivam
- Nesting of Golden Oriole and presence of crested bunting in Pali-Udaipur Border Forest of Rajasthan, by Jugal Kishor Tiwari
- Effects of organophosphorus and organochlorine preparations on birds, by Rajiv Saxena
- Hosting Birdwatchers, by Rajiv Saxena and Pradeep Shrivastava
- Hosting Birdwatchers by Anwar Khan Babi

EDITORIAL

Asian Mid-winter Waterfowl Census

This Census has become an important means of stimulating birdwatching in the country apart from its value in monitoring bird populations. Christian Perennou, Scientific Officer, (Waterfowl) International Waterfowl and Wetlands Research Bureau, Slimbridge, Gloucester, GL2 7BX, England, writes to say :

"The Asian Waterfowl Census Report 1991, is presently being mailed to all the participants.

Now that the country seems to have a lot of enthusiastic participants for the census every year, I would like to push the idea that a sample of tanks in areas such as Bangalore of Karnataka, Ramnad of Tamil Nadu, Kutch of Gujarat be selected and counted / visited every year. Their number (50, 80 ?) would depend on the number of participants expected in the long- term.

This method would have the great advantage to enable comparisons between years, whereas now the yearly differences can only be related to varying coverage. It could then become possible to detect population trends, influx of birds taking refuge from other areas affected by drought ... An example of exciting results which could be expected is described in the Asian Waterfowl Census Report 1991, i.e., the distribution of the Demoiselle Crane in India.

I would appreciate that persons in charge of counts in their respective areas should note that once the sample is selected (it should include the most important wetlands of course), these wetlands should be visited every year afterwards."

The California Condor

The report elsewhere in this issue about the California Condor refers to an incredible success story. It shows what money and scientific knowledge put together can achieve. By the time this Newsletter reaches you the two captive bred chicks will be released in the 14000 hectare Sespe Condor Sanctuary. I hope Aamir Ali will continue to send us clippings from the International Herald Tribune and other papers, so that we can keep track of this exciting project.

The Narcondom Hornbill

Samir Acharya, of the Society for Andaman and Nicobar Ecology, P.O. Box 63, Port Blair, 744101, A&N Islands, writes to say that after the recent eruption of Barren Island, there is apprehension that Narcondom Island too may erupt some day. He suggests that the rare Narcondom Hornbill should be captured and introduced into a similar habitat. Twenty pairs could perhaps be captured and

released in Landfall Island. Would the ICBP be interested in investigating possibilities? Incidentally, Barren Island had an interesting assortment of birds including Indian Koel, Andaman Wood Pigeon, Pied Imperial Pigeon, Whitebellied Sea Eagle, Andaman Red-checked Parakeet, Whitebellied Swiftlet, Andaman Hill Myna, Andaman Olivebacked Sunbird, Andaman Emerald Dove, White-eyes, and several others. In early 1992 there is going to be a Symposium to study the effect of the volcano on the natural life of Barren Island and we will get more news of the fate of these birds.

Dealing with Crows

K. Subramaniam, Assistant Professor, National Pulse Research Station, Vamban 622 303, refers to a simple method of protecting crops against crows. "Place 3 feet length stakes on the periphery of the crop at a spacing of 12 feet, and criss-cross a white thread .. and this prevents crows from approaching the crop" This system costs only Rs. 10/- per acre, and appears to be an example of appropriate technology which should be widely utilised.

Yellowthroated Bulbuls

Mike Crosby, ICBP Research Scientist (Biodiversity Project), International Council for Bird Preservation, 32

Cambridge Road, Girton, Cambridge CB3 0PJ, U.K., would like to have information on this species. In the Nov-Dec 1990 issue of the Newsletter details of the Biodiversity Project are given, and in the list of birds on which information is sought from Peninsular India, the Yellow-throated Bulbul *Pycnonotus xantholaemus* is mentioned. The Handbook says its general habits are little known, so we must track it down. S. Rangaswamy reports the presence of this bird from Rishi Valley, Chittoor District, A.P. Theodore Bhaskaran from Devarayanadurga, Tumkur District, Karnataka and S. Subramanya writing about his visit to the Thirumala - Tirupathi hills "spent seven hours in two days looking for YTB, sighted four birds and heard as many more"

Untidy Manuscripts

May I remind contributors again to send neatly written and carefully checked material for the Newsletter. I have now in my files a considerable amount of hand written stuff with plenty of spelling mistakes. It is tiresome to process these notes for publication. Several longish articles contain bits of interesting material, but excising them from the mass of verbiage is not easy. So naturally a neatly presented piece gets priority.

COMMON BAYA WEAVER BIRD – NEST BUILDING HABITS

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Synopsis

Common Baya Weaver Bird is a unique bird of the Indian sub- continent. It builds a retort shaped nest suspended vertically from tall palmyra trees and collects its building materials from paddy leaves in a very skilled manner. The nest building is done by adult cocks only who build two or more nests during the nesting season depending upon their breeding instinct. Each of the nest has a hen who gives finishing touches to the nest inside and makes it comfortable. The cock is therefore polygamous but this type of polygamy may be called successive polygamy in contrast to 'Harem' type which is common in most other types of birds. The paper describes a detailed and systematic study of nest building and egg laying habits of Bayas.

Introduction

The Indian Baya or the Baya Weaver Bird *Ploceus philippinus* is a unique bird of the Indian sub-continent because of its bright yellow breeding plumage on the head, mass chorus and a suspended nest which is a marvel of engineering skill. (Fig.1) Besides India, it is also found in



Fig.1 Typical Nests of Baya

the neighbouring countries of Bangladesh, Pakistan and Sri Lanka. Bayas are very similar to house sparrows in size and appearance except for the bright golden yellow patch on the forehead, neck and breast of the cock during the breeding season and a chorus of chee-ee-ee and flapping of wings in unison while the birds are nest building.

Nest Building

Bayas suspend their nest in a vertical position from the branch or twig of a tree both on land and water. Nests hung along telephone wires or from palm leaf-thatching of tenanted villages are also not uncommon in some parts of the country. The trees most favoured are Babool (*Acacia* sp.), Ber (*Zizyphus* sp), Palmyra palm (*Borassus flabellifer*) Tamarind (*Tamarindus indica*) and Coral (*Erythrin indica*). Out of them the first two are more patronised. The same tree is used for two or more seasons but it is rare to see the same nest being used more than once. The birds invariably select the eastern side of the tree to build upon since it is protected from the South West Monsoon. Normally there is no tree directly underneath which could afford access to the enemy or predator from below.

The materials used for building the nest are either strips of palmyra leaves, coarse grass or paddy plant. The method of tearing the strips and handling them is rather ingenious and interesting. The paddy leaf has a saw edge and is furnished, with minute upwardly directed spines on the several ridge-like almost parallel veins. The leaf can therefore be split or torn if pulled in a vertical direction at a point. The saw edge and the spines do not allow a pull in the transverse direction. When tearing off strips, the Baya makes an indentation roughly 30 cm from the tip, of the required width, and by sideways jerk of the head, tears it upwards towards the tip, but not severing it completely. Next it bites through another width, still holding the first undetached strip in its beak. The operation is repeated till it has two strips, still connected at the tip. It continues with the third and often a fourth strip in the same manner. The bird now flies off and the air drag so exerted severs the bunch of strips at the tip and the bunch trails through the air after the bird as a number of individual lot. On arriving at the building site, the Baya presses the bunch into the nest under construction. The serrated edge and the spines prevent the strips from slipping and falling down. The bird works at the lower end of the strip which is threaded through and pulled out. The roughness operates like the teeth of a ratchet and maintains the strips in position once they have been properly pulled in. One end of the strip is held down by the foot of the bird while other end is being woven in. When commencing the nest, the strands are wound and twisted round and round the selected twig until a firm support is secured. From this support descend the mass of strips, something like a tassel which is worked

into a transverse loop. This loop invariably forms the skeleton of the structure. The bird expands its lower end into a bulb-shaped structure which is about 30 cm in diameter in one direction and about 10 cm in the other. At this juncture the bird decides on the location of the egg chamber and constructs strong transverse loops, a little to one side of the centre of the chamber forming a division between the egg chamber and the long tubular entrance which is about 5 cm in diameter and 15 cm in length. Alongwith strips and grasses a little mud is also used in nest building. The purpose of the mud is still not very clear. It has been suggested that it is put there to add weight to the nest and prevent it from swaying violently. Another amusing suggestion is that the mud is used to catch fire flies in the nest. None of these are very convincing and it is still a useful area for research.

Most persons support the idea of co-operation between the male and the female to start of building operation. But Salim Ali (1931) differs and based on systematic observations says that both site selection and nest building are done exclusively by the male birds. The adult cocks in full breeding plumage are earliest to start and always keep to colonies of their own. The younger cocks generally take to nest building late in the season and likewise have their separate colony. It is rare to see an adult cock building in company with a youngster. The latter works without previous training or experience. Consequently all such juvenile nests are rarely completed. They are also of odd queer shapes and rather unusual in appearance.

Colony

In the initial stages of an adult nesting colony, no hens are in evidence. but when the nests have reached the stage of egg chamber the females start arriving near the nest and prospect for the laying site. The arrival of the female causes a great commotion in the community of working cocks who leave their work pressing their attention on the hens, at times with such passion that it causes the hens to retire from the tree. They however soon return and deliberately visit nest after nest entering them and sitting on the cross bars in the absence of the owner cock who has gone to fetch the building materials. If a hen is satisfied with a particular nest, she persists in returning to it again and again on being strutted and chased by the cock who gradually gets used to her presence and finally accepts her as his spouse. Two or more hens often fight for the possession of an acceptable nest and the one who wins, boldly enters the nest and gets busy with furnishing to make the interior comfortable. The major share of building is done by the cock alone and the hen contributes only to interior decoration. She will rarely fetch a strip of grass though she may occasionally fetch a feather, some mud or some vegetable down which is

incorporated into the bottom of the egg chamber. Shortly after occupation the eggs are laid.

Laying of Eggs

The site of copulation is still a bit of mystery, since apart from strutting and posturing of the cocks, it is rare to see the active copulation. It does not appear to take place on the nesting tree and it is unlikely to take place outside. From various little movements of the nest and sundry twittering from within, after a cock has followed the hen into a nest, it is believed that copulation takes place inside the nest itself, where the pair is not likely to be disturbed by the attention of the neighbouring cocks. The cocks take no part in the incubation of the eggs. Ambedkar (1957) has made a careful study during the 1957 breeding season. He has observed that the copulation takes place on the chin strap or cross bar of the nest in the helmet stage. He also found that the average incubation period was 16 - 17 days. It was also the period between the bird hatching and leaving the nest.

The building mania that comes over the adult cock is a sure indication of his readiness to breed and as long as he continues to build the nest the indication manifests that he is prepared to have fresh wives. As soon as the first nest is completed and occupied by a hen the cock starts building the second one. If he is strong and vigorous and his instinct to breed sufficiently intense he completes the second nest and goes on to the third and even the fourth. As soon as the egg chamber is ready the nest is taken possession by another prospecting female from amongst the many that are hanging about the colony. A cock may sometimes start building the third and the fourth nest also but three or more nests by a cock are not so common. The number of his wives is dependent upon the number of completed nests he is able to build, a factor depending upon his potency or the force and intensity of his breeding instinct.

A single cock may acquire possession of three or even four nests and families in one and the same season. This type of polygamy may be called 'successive polygamy' in contrast to 'harem' type of many game birds in which a single cock holds mastery of a bevy of hens in the tradition of old oriental society. While this is the general rule, in a few cases, casual promiscuity has also been observed by Salim Ali (1956). In such cases the cock will surreptitiously attempt to copulate with the hens visiting the absent neighbour's nest, flying off rapidly on the owner's return. In similar manner a married female newly in possession of

a nest and a mate, will sometimes snatch a hasty opportunity to hop across to a neighbouring eligible nest, in appropriate helmet stage in the momentary absence of its rightful mistress, deliberately exposing herself to amorous advances of the married owner, and even inviting and permitting copulation.

As to the number of eggs laid by the Baya two to four eggs constitute a normal clutch. When more than this number occurs they are normally the product of two or more hens. Such laying has been explained by Salim Ali (1931) in the following manner. A female whose physiological ripeness for egg laying has been delayed through some cause often arrive at a colony late in the season to find that there is no nest for her to occupy. She moves and is chased about from nest to nest until she comes upon one which already contains eggs but is unattended. The real owner hens leave the nests to themselves for a considerable period during the heat of the day. The intruding hen promptly enters, deposits her eggs and is off again. It is also possible that owing to the paucity of laying sites a third hen may also be driven to the same nest. Considering that copulation takes place inside the nest, it is possible that a hen which slipped in surreptitiously and without drawing the attention of the cock, may lay eggs that are infertile.

Bayas are also popular with bird fanciers and with entertainers at country fairs in India. The birds readily learn to perform a variety of clever tricks such as retrieving a ring thrown into a well before it hits the water, threading tiny beads with a needle, plucking and bringing leaves from a chosen tree and picking up the correct numbered card from amongst several spread before them. Many of the tricks require much skill and intelligence and the birds appear to enjoy performing them. A popular proverbial rhyme in the Punjab contrasts the house building talent of the Baya with the helplessness of the shelterless monkey in spite of the latter possessing large hands and feet like a human.

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**Participate in Asian Mid-winter Waterfowl Census,
10 - 26 January 1992**

RANGANATHITTU : FLOOD HAVOC AND AFTERMATH

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Ranganathittu, the picturesque bird sanctuary near Mysore is an important breeding ground for about seventeen species of waterbirds. What adds to the beauty of the sanctuary is the cluster of eleven vegetation (trees and bushes) covered Islands of varying sizes located in the mid-stream of river Cauvery, at Srirangapatnam, about 16 km from Mysore city. Though the birds nest at the sanctuary almost right through the year, a majority of them (egrets, herons, cormorants, ibis, storks) nest in greater densities during monsoon.

Floods at Ranganathittu have been a regular feature in the past (see Neginhal, 1980; 1982). Whenever there are heavy monsoon rains in the Western Ghats containing the catchments of three rivers - Lakshmanathirtha, Cauveri and Hemavathi, the Krishnarajasagar reservoir (KRS) (about 80 sq. km. in extent, built at the confluence of these three rivers at Mysore, see Fig.1) gets a copious supply. The excess water impounded at such times is usually released from KRS causing a spate that invariably washes away the low-lying nests built within two metres from the normal water level at Ranganathittu, located downstream. However, none of the previous releases have matched in severity, the 28 July 1991 flood that has left a trail of destruction.

On 28 July about 174,000 cusecs of water, a record inflow in the last 30 years filled up KRS to nearly 3900 cm height, a level reached only at its full capacity. This resulted in a panic-release of water which gushed down towards Ranganathittu.

On 30 August 1991, at the instance of the Chief Conservator of Forests (Wildlife Wing) Karnataka State Forest Department, we paid a visit to Ranganathittu along with Mr. Bhoja Shetty, IFS (Retd.) to assess the damage to the habitat and nesting birds and suggest recommendations for necessary action. We covered the sanctuary mainly on foot. A boat was pressed into service for an hour to enable us to go round each of the islands and take a closer look. In this article, we present our observations.

Extent of Damage to Islands

The release of excess water at KRS, on 28 July 1991 raised the water level at the sanctuary by about five metres. The

debris cluttered up in Bamboo clumps and on trees in the islands and those around, that can be seen even today, clearly indicate the level at which the flood waters stood. The surging waters either submerged or washed away ten of the eleven islands in varying degrees. As a result island Nos. 6, 7, 9, 10 (See Fig.2) have totally disappeared (as on 30 Aug. 1991) mainly due to loss of vegetation. Island No.1 has been devegetated. All those islands covered with *Pandanus* clumps (island 2, 9, 10 and 11) have been severely hit by the flood. The flood waters have uprooted the *Pandanus* clumps and have borne them away. The *Pandanus* undergrowth of island No.2 has been totally removed. Islands 4 and 5 which were the main Openbill Stork *Anastomus oscitans* nest sites have been affected severely with their principal vegetation *Terminalia arjuna* stripped with only the main branches remaining (the process of rejuvenation was already in evidence with new sprouts of foliage all over them!). Except for a lone *Salix tetrasperma* tree, much of the vegetation on island No.8 has been levelled and uprooted. Island No.11 which has been the most favoured nest-site for Purple Herons *Ardea purpurea* and Spoonbills *Platalea leucorodia* has been stripped of all its *Pandanus* growth. This provided the ideal nest substrate for the two species.

The flood waters have deposited debris (twigs, leaves and grasses) among the remnant vegetation choking the available nest-space in and around the islands.

Extent of damage to nesting birds

A conservative estimate has put the number of affected pairs (those that have lost their nests, eggs and nestlings) at a little over 1500. The detailed survey has revealed that most of the affected nesting pairs have commenced their second (successive?) brood immediately after the receding of flood waters. This is indicated by :

- a) a large number of new nests with parents incubating synchronously (none of these nests showed any signs of nestlings of any age, nor were any of the parents seen feeding young ones).
- b) a great majority of these nests with incubating parents were built below the five metre flood level mark, indicating that all these nests were built only after the flood waters receded.

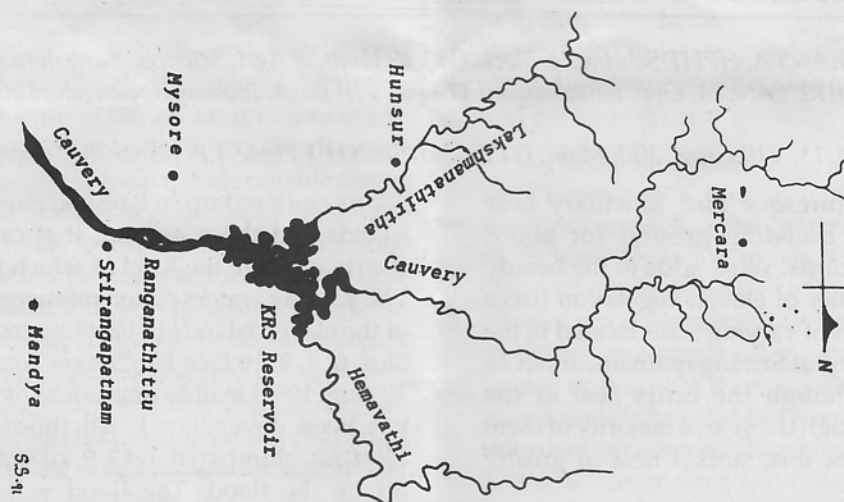


Fig. 1 Location of Ranganathittu with respect to the origin of three rivers that feed water to KRS.

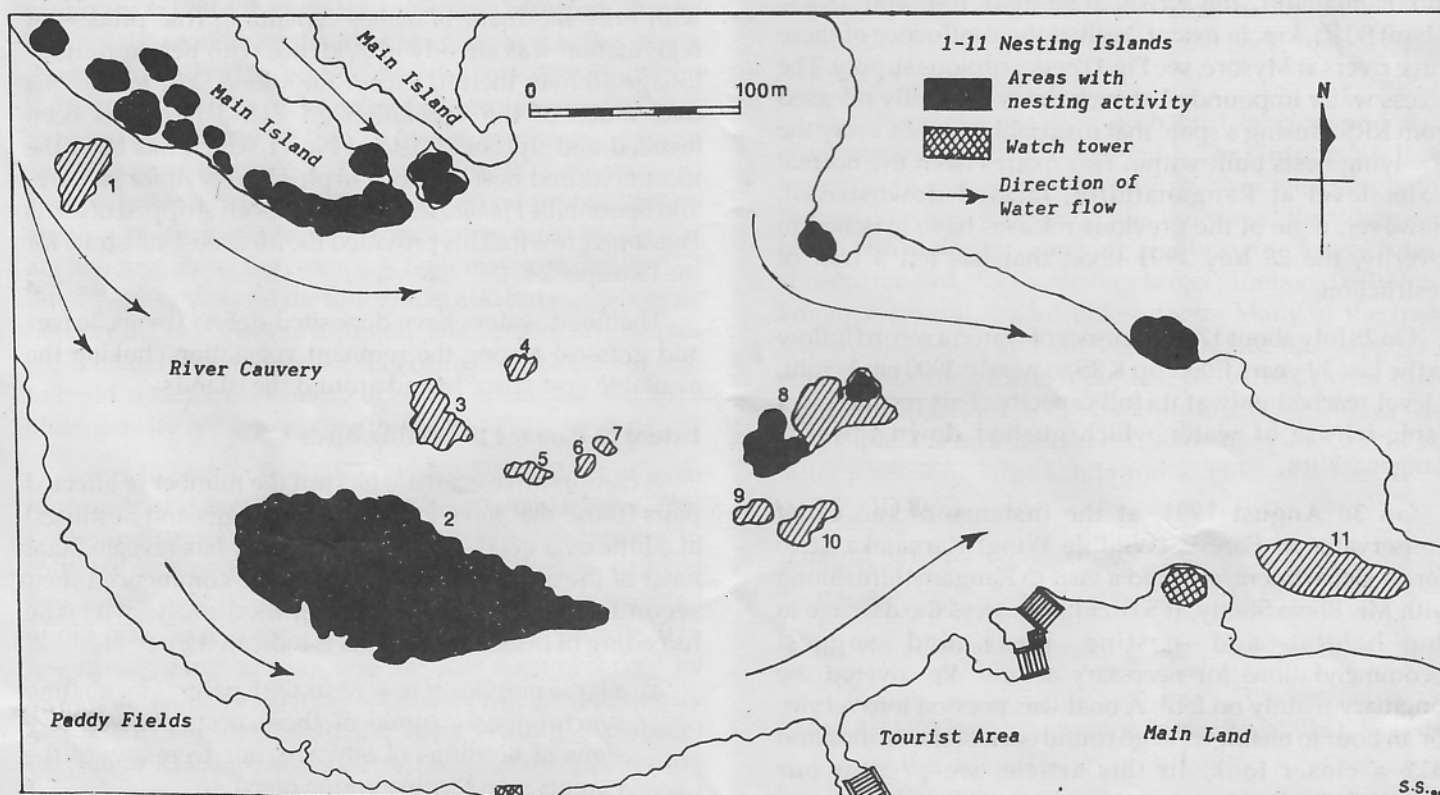


Fig. 2 Map of Ranganathittu Bird Sanctuary. The nesting activity indicated is as on 30 August 1991.

The following species were seen re-nesting and incubating their eggs :

1. White Ibis *Threskiornis melanoccephala*
2. Median Egret *Egretta intermedia*
3. Openbill Stork *Anastomus oscitans*
4. Little Egret *Egretta garzetta*
5. Large Egret *Egretta alba*
6. Cattle Egret *Bubulcus ibis*
7. Darter *Anhinga rufa*
8. Night Heron *Nycticorax nycticorax*

As indicated in the order above, of the eight species, White Ibis has been the most affected species as seen by the large scale synchronous incubation by the affected pairs. A count of the re-nesting White Ibises put the new nests at a little over 1000 nests. The rest 500 plus new nests comprised of the other seven species.

A majority of the herons (Pond and Night), egrets (Cattle, Little, Median and Large), cormorants (Little and Shag) and Darters have escaped the fury of the floods as these species had completed nesting well before the onset of the 'great flood'. Only a small percentage of each of these species have been affected.

Species like Large Cormorants *Phalacrocorax carbo* and most of the Openbill Storks and Darters which usually nest at a higher level have escaped the flood effects. A majority of the nests of these three species observed during the survey contained slightly grown-up nestlings indicating that these species were not affected much by the flood.

Unfortunately, the owners of the eight Spoonbill nests on *Pandanus* clumps that were washed away, indicated no signs of re-nesting during our visit.

Nesting Pattern after the Flood

Observation on the distribution of nests after the flood shows that birds have taken to nesting along the peripheral vegetation (see Fig.2). A great concentration of such nests can be seen on the northern region of the sanctuary in addition to island No.2 and 8 (where birds have started nesting on what remains of the destroyed vegetation!). This clearly indicates that despite the catastrophe birds have not abandoned the sanctuary.

A detailed planting plan for revegetation of some of the islands and different sections of the sanctuary has been suggested to put the situation slowly 'back on the tracks'. The Forest Department has been asked to leave the uprooted *Pandanus* clumps scattered in different parts of the sanctuary untouched as they may serve as fresh nesting-sites for birds after regrowth. A three-tier planting plan has been recommended to plug the peripheral gaping gaps which have been opened-up by the gushing waters of the July flood.

In short, breeding birds at Ranganathittu have withstood and overcome the disaster admirably by taking to re-nesting and not abandoning the sanctuary.

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AVIFAUNA OF CHINNAR WILDLIFE SANCTUARY

NAMEER, P.O. and SUMAN JACOB GEORGE, College of Forestry, Vellanikkara, Thrissur, Kerala 680 654

The erstwhile Chinnar Reserve Forest, of the Munnar Forest Division, was brought under a separate wildlife sanctuary, in the year 1984, taking into consideration the distinct faunal, floral and geomorphological entities. It is located between latitudes 10° 05' and 10° 21' N, and longitudes 77° 06' and 77° 16' E. Its uniqueness stems from the fact, that the sanctuary comes in a rain-shadow region of the Western Ghats - a rarity in Kerala, a state rich in rainfall; thus giving rise to an unique zoogeographic and phytogeographic region. The annual rainfall is only around 150 mm. The elevation ranges between 440 - 2300 m. A variety of habitats surround this area; grassland and sholas of the Eravikulam National Park, moist deciduous forests of the Indira Gandhi National Park and the various forest

types of the Munnar Forest Division. The edge-effect provided by these habitats give ample scope for wildlife migration, especially during the 'pinch-periods', thus enjoying the seasonal benefits of these habitats. A forest-type-wise break-up shows that of the total area of 90 square km about 60 percent can be classified as thorny shrub forest, 33 percent as dry deciduous forest, five percent as grassland and shola forest. Apart from this, the fringes of the two main water courses- Pambar and Chinnar have riparian fringe forests.

In spite of the general awareness about the uniqueness of the area, the avifauna especially has not been studied in much detail.

This is evident from the recently published Management Plan of the sanctuary which gives a threadbare list of 10 birds.

The present avifaunal list, was compiled by us during our short stay at Chinnar, in the month of November, 1990. In all probability, this may not be an exhaustive check-list of the area, albeit 116 bird species could be identified; thus it should not be taken as the last word on the avifauna of this bird rich region.

BIRD LIST

Sl. No.	Synopsis No.	Common Name and Scientific Name
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Family Ardeidae

001	0042	Pond heron <i>Ardeola grayii</i>
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Family Accipitridae

002	0124	Blackwinged kite <i>Elanus caeruleus</i>
003	0134	Brahminy kite <i>Haliastur indus</i>
004	0139	Ceylon shikra <i>Accipiter badius</i>
005	0161	Crested hawk-eagle <i>Spizaetus cirrhatus</i>
006	0197	Crested lesser serpent-eagle <i>Spilornis cheela</i>

Family Falconidae

007	0224	Indian Kestrel <i>Falco tinnunculus</i>
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Family Phasianidae

008	0255	Jungle bush quail <i>Perdica asiatica</i>
	0260	Rock (Deccan) bush quail <i>Perdica argoondah</i>
009	0301	Grey junglefowl <i>Gallus sonneratii</i>
010	0311	Peafowl <i>Pavo cristatus</i>

Family Columbidae

011	0496	Greyfronted green pigeon <i>Treron pompadora</i>
012	0507	Imperial green pigeon <i>Ducula aenea</i>
013	0511	Jerdon's imperial pigeon <i>Ducula badia</i>
014	0537	Indian spotted dove <i>Streptopelia chinensis</i>
015	0541	Indian little brown dove <i>Streptopelia senegalensis</i>
016	0542	Indian emerald dove <i>Chalcophaps indica</i>

Family Psittacidae

017	0550	Roseringed parakeet <i>Psittacula krameri</i>
018	0558	Blossomheaded parakeet <i>Psittacula cyanocephala</i>
019	0564	Bluewinged parakeet <i>Psittacula columboides</i>
020	0566	Indian loriquet <i>Loriculus vernalis</i>

Family Cuculidae

021	0571	Pied crested cuckoo <i>Clamator jacobinus</i>
022	0573	Common hawk-cuckoo <i>Cuculus varius</i>
023	0576	Indian cuckoo <i>Cuculus micropterus</i>
024	0582	Indian baybanded cuckoo <i>Cacomantis Sonneratii</i>
025	0584	Indian plaintive cuckoo <i>Cacomantis merulinus</i>
026	0590	Indian koel <i>Eudynamis scolopacea</i>
027	0595	Small greenbilled malkoha <i>Rhopodytes viridirostris</i>
028	0602	Coucal/Crow-pheasant <i>Centropus sinensis</i>

Family Strigidae

029	0623	Indian collared scops owl <i>Otus bakkamoena</i>
030	0628	Forest eagle-owl <i>Bubo nipalensis</i>
031	0631	Brown fish owl <i>Bubo zeylonensis</i>
032	0637	Malabar barred jungle owlet <i>Glaucidium radiatum</i>

Family Caprimulgidae

033	0669	Great eared nightjar <i>Eurostopodus macrotis</i>
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Family Apodidae

034	0703	Indian house swift <i>Apus affinis</i>
035	0709	Crested tree swift <i>Hemiprocne longipennis</i>

Family Alcedinidae

036	0724	Small blue kingfisher <i>Alecedo atthis</i>
037	0736	Whitebreasted kingfisher <i>Halcyon smyrnensis</i>

Family Meropidae

038	0744	Chestnutheaded bee-eater <i>Merops leschenaulti</i>
039	0750	Small gree bee-eater <i>Merops orientalis</i>
040	0753	Bluebearded bee-eater <i>Nyctornis athertoni</i>

Family Coraciidae

041	0756	Indian roller <i>Coracias benghalensis</i>
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Family Upupidae

042	0765	Ceylon hoopoe <i>Upupa epops</i>
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Family Capitonidae

043	0782	Ceylon green barbet <i>Megalaima zeylanica</i>
044	0785	Small green barbet <i>Megalaima viridis</i>
045	0790	Crimsonthroated barbet <i>Megalaima rubricapilla</i>
046	0792	Crimsonbreasted barbet <i>Megalaima haemacephala</i>

Family Picidae

047	0816	Indian small yellownaped woodpecker <i>Picus chlorolophus</i>
048	0821	Kerala goldenbacked woodpecker <i>Dinopium benghalense</i>
049	0825	Malabar goldenbacked throated woodpecker <i>Dinopium javanense</i>
050	0847	Yellowfronted pied woodpecker <i>Picoides maharattensis</i>
051	0853	Kerala pigmy woodpecker <i>Picoides nanus</i>
052	0862	Larger goldenbacked woodpecker <i>Chrysocolaptes lucidus</i>

Family Hirundinidae

053	0914	Dusky crag martin <i>Hirundo concolor</i>
054	0919	Nilgiri house swallow <i>Hirundo tahitica</i>

FAMILY LANIIDAE

055	0940	Indian baybacked shrike <i>Lanius vittatus</i>
056	0947	Indian greybacked shrike <i>Lanius schach</i>
057	0949	Brown shrike <i>Lanius cristatus</i>

Family Oriolidae

058	0953	Indian golden oriole <i>Oriolus oriolus</i>
059	0954	Blacknaped oriole <i>Oriolus chinensis</i>
060	0959	Indian blackheaded oriole <i>Oriolus xanthornus</i>

Family Dicruridae

- 061 0963 Southern black drongo *Dicrurus adsimilis*
 062 0965 Indian grey drongo *Dicrurus leucophaeus*
 063 0967 Indian whitebellied drongo *Dicrurus caerulescens*
 064 0971 Bronzed drongo *Dicrurus aeneus*
 065 0977 Large racket-tailed drongo *Dicrurus paradiseus*

Family Artamidae

- 066 0982 Ashy swallow-shrike *Artamus fuscus*

Family Sturnidae

- 067 0987 Greyheaded myna *Sturnus malabaricus*
 068 1010 Jungle myna *Acridotheres fuscus*

Family Corvidae

- 069 1033 Kerala treepie *Dendrocitta vagabunda*
 070 1057 Indian jungle crow *Corvus macrorhynchos*

Family Campephagidae

- 071 1065 Blackbacked pied flycatcher-shrike
Hemipus picatus
 072 1068 Malabar woodshrike *Tephrodornis gularis*
 073 1070 Indian Woodshrike *Tephrodornis pondicerianus*
 074 1072 Indian large cuckoo-shrike *Coracina novaehollandiae*
 075 1079 Blackheaded Cuckoo-shrike *Coracina melanoptera*
 076 1081 Orange minivet *Pericrocotus flammeus*
 077 1093 Small minivet *Pericrocotus cinnamomeus*

Family Irenidae

- 078 1101 Ceylon iora *Aegithina tiphia*
 079 1105 Goldfronted chloropsis *Chloropsis aurifrons*
 080 1107 Jerdon's chloropsis *Chloropsis cochinchinensis*
 081 1109 Fairy bluebird *Irena puella*

Family Pycnonotidae

- 082 1120 Redwhiskered bulbul *Pycnonotus jocosus*
 083 1128 Redvented bulbul *Pycnonotus cafer*
 084 1138 Whitebrowed bulbul *Pycnonotus luteolus*
 085 1144 Yellowbrowed bulbul *Hypsipetes indicus*
 086 1149 Black bulbul *Hypsipetes madagascariensis*

Family Muscicapidae

- 087 1155 Kerala Spotted Babbler *Pellorneum ruficeps*
 088 1174 Kerala scimitar babbler *Pomatorhinus schisticeps*

- 089 1221 Whitethroated babbler *Dumetia hyperythra*
 090 1264 Peninsular jungle babbler *Turdoides striatus*
 091 1267 Whiteheaded babbler *Turdoides affinis*
 092 1407 Brown flycatcher *Muscicapa latirostris*
 093 1412 Eastern redbreasted flycatcher *Muscicapa parva*
 094 1449 Greyheaded flycatcher *Culicicapa ceylonensis*
 095 1452 Southern whitebrowed fantail flycatcher
Rhipidura aureola
 096 1460 Peninsular paradise flycatcher
Terpsiphone paradisi
 097 1504 Franklin's ashy grey wren-warbler
Prinia hodgsonii
 098 1513 Nilgiri plain wren-warbler *Prinia hodgsonii*
subflava
 099 1535 Indian tailor bird *Orthotomus sutorius*
 100 1661 Indian magpie-robin *Copsychus saularis*
 101 1702 Nilgiri pied bush chat *Saxicola caprata*
 102 1720 Blackbacked Indian robin *Saxicoloides fulicata*

Family Paridae

- 103 1795 Indian grey tit *Parus major*

Family Sittidae

- 104 1838 Velvetfronted nuthatch *Sitta frontalis*

Family Motacillidae

- 105 1870 Nilgiri pipit *Anthus nilghiriensis*
 106 1874 Forest wagtail *Motacilla indica*
 107 1884 Grey wagtail *Motacilla caspica*
 108 1891 Large pied wagtail *Motacilla maderaspatensis*

Family Dicaeidae

- 109 1892 Thickbilled flowerpecker *Dicaeum agile*
 110 1902 Nilgiri flowerpecker *Dicaeum concolor*

Family Nectariniidae

- 111 1907 Purplerumped sunbird *Nectarinia zeylonica*
 112 1909 Small sunbird *Nectarinia minima*
 113 1917 Indian purple sunbird *Nectarinia asiatica*

Family Ploceidae

- 114 1949 Indian yellowthroated sparrow
Petronia xanthocollis
 115 1968 Whitebacked munia *Lonchura striata*
 116 1974 Indian spotted munia *Lonchura punctulata*

NOTES ON THE INDIAN SHAG, AVOCET, AND LITTLE EGRET

V. SANTHARAM, 68, I Floor, Santhome High Road, Madras 600 028

PLAY BEHAVIOUR IN THE INDIAN SHAG

In the March - April 1987 (XXVII - No. 3&4) issue of the Newsletter, I had written about an observation concerning

the Indian Shag *Phalacrocorax fuscicollis* made at Vedanthangal on 23 March 1985. A group of adult and sub-adult birds were seen diving under water frequently

and emerging with a leaf or twig (4-5 inches in length). This was tossed about for a few seconds as the bird kept swimming. After some time, the bird would lose interest and discard the material. At times a bird would snatch its neighbour's twig or leaf. All the birds took part in this activity at one time or other. After a few minutes, some of the birds took off but another set of birds joined in and the activity continued.

I was unable to offer a suitable explanation to this behaviour then and no one else had offered any comments on this, either. However, recently while going through the book "The growth and development of birds" by Raymond J.O'Connor (Wiley, 1984), I found a plausible explanation to this behaviour. Relevant extracts from the book are given below.

Play can prepare the young animals for adult life in at least three important ways :

- 1) It enhances muscular development;
- 2) It results in discoveries and finding out the consequences of the animal's own actions; and
- 3) It can adjust social relationships needed later in life in a social species...

In play with objects, the main function is to provide practice in areas requiring dexterity or judgement. Playing with objects is widespread amongst raptors, cormorants, pelicans, and many fish-eating birds, species with skilled foraging techniques. Bildstein (1980) has shown that juvenile Hen Harriers 'play' with objects (corn cobs) of the same size spectrum as their usual vole prey, ignoring larger and smaller objects also available. Practice thus accrues to the muscles later used in manipulating captured voles... Prolonged parental care is also the rule where the young must acquire high skills in prey capture. Ashmole and Tovar (1968) note the occurrence of such cases in such groups as frigate-birds, terns, owls and kingfishers, all of them species with small clutches and no second broods. Juveniles of these species often spend much time in play activities related to hunting behaviour.

So, were the sub-adult birds seen in the group of shags at Vedanthangal, being "trained" by adults in the intricate art of diving and foraging? I invite others to comment on this note.

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STATUS OF THE AVOCET IN MADRAS CITY

The status of the Avocet *Recurvirostra avosetta* in southern India is unclear. Ali and Ripley (1983) say that this species is "less common, sporadic and/or occasional" in many parts of the peninsula. In Tamilnadu, it has been specifically reported from Rameshwaram Island and Point Calimere. It is a "rare straggler to Ceylon, observed in February and July".

Recently, Perennou and Santharam (1990) have reported the sighting of a large congregation of about 845 Avocets in Pulicat Lake in January 1988. Hoffmann (1989) reports that this species has now become a regular winter visitor in small numbers, in northern and southern Sri Lanka. In Madras, I have been seeing this bird since 1978. In this note, I summarize all these sightings.

All the sightings have been at the Adyar Estuary where I have seen the Avocet on 137 occasions (Table 1). I have seen them in all the months of the year although there have been more sightings between February-June. In certain years, the species is completely absent. Taking August as the beginning of the migratory season (as most migrant waders start arriving by August in Madras), there were no sightings of the Avocet in 1983-84, and in 1984-85 there was just a single sighting. Again in the 1990-91 season, there have been no sightings till May 1991. In certain years, they appear to be present all through the year. In 1986, for instance, the birds were seen from January to March and again from June-October. Up to a hundred birds were seen in the latter period.

The frequency at which the various flock sizes have been sighted is given in Table 2. There have been fewer sightings of congregations over 50 birds and the maximum number seen has been 120 birds. The dates of the first and last sightings in the various years (assuming August marks the beginning of the season) is given in Table 3.

We have been seeing large congregations of Avocets at Pulicat Lake for the last 4 years (Table 4). These sightings indicate Avocets may prefer large, shallow wetlands and may use smaller ones like Adyar on Passage or during certain times of the year when conditions are favourable. Similar numbers may be expected from other major wetlands of the Coromandel Coast.

The frequency and regularity of these sightings suggest that the Avocet is no longer "sporadic or occasional" in Southern India as it was believed to be in earlier years. Sighting these birds in all the months of the year raises an important and interesting question: Do these birds breed in Southern India?

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Table 1

A Summary of sightings of Avocets at the Adyar Estuary, Madras from August 1978 - May 1991.

Month	No. of Years	No. of Sightings	Mean no. of birds seen	Maximum seen
January	3	5	18.4	28
February	6	14	12.2	35
March	9	32	21.9	72
April	9	30	13.4	36
May	6	15	32.3	120
June	6	13	14.0	35
July	2	5	41.2	100+
August	1	3	24.0	50
September	2	3	11.3	15
October	4	8	18.9	50 +
November	3	7	5.0	8
December	2	2	3.5	4

Table 2

Frequency of various flock sizes seen

Numbers	Frequency
1-5	46
6-10	20
11-20	30
21-50	34
50+	7

Table 3

Dates of first and last sightings for various years (assuming the season commences on 1st August and ends on 31st July)

Year	First Sighting	Last Sighting
1978-79	31 Dec. '78	29 May '79
1979-80	3 Nov. '79	15 Feb. '80
1980-81	12 Oct. '80	21 Jun. '81
1981-82	14 Mar. '82	8 May '82
1982-83	20 Oct. '82	1 Jun. '83
1983-84	No Sightings	
1984-85	Only one sighting on 27 Apr. '85	

1985-86	18 Jan. '86	27 Jul. '86
1986-87	2 Aug. '86	28 Jun. '87
1987-88	27 Sep. '87	7 Jul. '88
1988-89	13 Feb. '89	5 Jun. '89
1989-90	18 Mar. '90	14 Jun. '90
1990-91	No sightings till May 1991	

Table 4

Numbers observed at Pulicat Lake in the Last 4 years

Year	Month	Numbers
1988	January	845
1989	February	200
1990	February	700
1991	January	219

A LARGE FORAGING TERRITORY OF A LITTLE EGRET

I followed the activities of a solitary Little Egret *Egretta garzetta* at the Lower Papanasam Dam in the Mundanturai Wildlife Sanctuary (now Kalakkad - Mundanturai Tiger Reserve) for three days in January, 1989. The bird was followed continuously and its activities were noted every minute as (a) nesting, (b) foraging and feeding and (c) interactions and preening.

On no day there were more than five or six birds present in the reservoir, as seen from my observation point. Even these birds were very much scattered. Other waterbirds regularly seen here were Little Cormorant, Cattle Egret, Median Egret and Pond Heron. These birds were not seen in good numbers, either.

The bird under observation used the railings put up in one corner of the reservoir as its main resting spot and from here it would make forays to the mudflats and shallow parts from time to time. This position also offered the bird a vantage point, giving a good view of the territory it defended. Unlike in other areas (eg. Adyar Estuary) where I have seen Little Egrets in large numbers, feeding together, close to one another or maintaining smaller territories of a few meter radius, this bird appeared to defend a larger territory. My observations showed the bird foraging along and defending at least a kilometer-long stretch of the shore line. From its foraging site, it once flew at least 500 meters to displace a rival Little Egret.

In the 22.5 hours of observation, the bird encountered other species or individuals of its own species on 23 occasions. The interactions are summarised in Table 1. The bird never reacted to the presence of Little Cormorants and

Pond Herons, though the latter were seen landing on the railings as close as a meter or two from it. Cattle Egrets were ignored sometimes and were seen next to one another and at other times, the intrusion was objected to and the intruder was successfully put to flight. Rival Little Egrets including those flying overhead, were always chased away successfully. Only once did the bird react to the presence of the Median Egret, larger than itself. However, the bird failed to displace the intruder. Later, both birds were seen foraging side by side, on the same mudflats, once less than a meter from one another.

On the three days, the bird spent 48 minutes (12.3% of the time observed), 104 mts (22.5% of time observed) and 215 mts (44.8% of time observed) searching for prey and the actual time spent on feeding/pecking was 12, 55 and 36 minutes respectively (ie 25%, 53% and 17% of the searching time). Foraging depended on the availability of the exposed mudflat and shallow waters, when the water-level was low. The water level of the reservoir was subject to rapid changes with the inflow or withdrawal of water when the hydel power houses upstream or below operated. As the time of operation of the power houses was not consistent,

there was a difference in the activity pattern and time spent on various activities, each day.

The reason for the hostile attitude towards others of its own species and the defending of a large territory by this little Egret appears to be related to the shortage and unpredictability of foraging sites and, perhaps also, food. This also appears to restrict the number of birds at the reservoir. At other sites such as the Adyar Estuary, where foraging sites and food are in plenty, the birds congregate in large numbers.

TABLE 1

Species	Total Encounters	No Response	Success in displacing intruders	Failure in evicting
Little cormorant	1	1	-	-
Little Egret	4	-	4	-
Median Egret	7	6	-	1
Cattle Egret	6	3	3	-
Pond Heron	5	5	-	-
Total	23	15	7	1

TWO CHICKS ARE THE FUTURE FOR U.S. CONDOR

ROBERT REINHOLD

Just four years after federal wildlife officials rounded up the last wild California condors in a Dunkirk-like evacuation to save the species from extinction, they have decided to start restoring the giant ancient birds to the wild.

The decision represents a milestone for what is probably the most ambitious and costly effort ever undertaken to replenish a nearly extinct species.

Two condor chicks are to be released in September or October into a rugged mountainous sanctuary in Los Padres National Forest, about 50 miles (80 kilometers) north-west of downtown Los Angeles. If that first step is successful, the hope is ultimately to create two separate wild populations of about 100 birds each.

The condor, a type of vulture whose wing-span can reach 10 feet (3 meters), dates back nearly a million years and soared when the now-extinct mastodons and mammoths roamed the planet. But having survived a million years of evolutionary upheavals, these magnificent birds have been unable to withstand the human depredations of the 19th and 20th centuries. Ravaged by hunters and poisoned food, the condor population dropped to 22 by 1983.

Despite the intense opposition of some conservation groups, the U.S. Fish and Wildlife Service captured the last

remaining wild birds in 1987 to have them bred at the Los Angeles Zoo and the San Diego Wild Animal park. The breeding has been so successful - 13 chicks have hatched this year alone - that there are now 52 birds, enough to release two chicks into the wild as an experiment.

Details of the release were announced Friday at a symbolic place: the George C. Page Museum, which holds the fossilized remains of mastodons, saber-tooth tigers and other ancient creatures trapped in the nearby La Brea Tar Pits on what is now Wilshire Boulevard in Los Angeles.

"Success is possible," said Lloyd Kiff, an ornithologist who leads the 10-member California Condor Recovery Team. "They are the avian equivalent of an elephant or Bengal tiger. No one can be indifferent to a condor soaring. It is very moving."

There are only two species of condor - the California and the Andean. Of the latter, several thousand exist in South America. But the story of the California condor, formally *Gymnogyps californianus*, has been especially dispiriting - a chronicle of the human species' cruel dominion over the animal world.

Fossil evidence shows that by the end of the Pleistocene epoch, about 100,000 to 200,000 years ago, California condors ranged over much of North America,

some having been found in Florida and upstate New York. When the first European explorers reached the West Coast, the birds were common from Canada to Baja California in Mexico.

But by the turn of the 20th century, no more than a few hundred condors remained. They were not given legal protection under California law until 1953, when there were fewer than 100 left.

In 1967, they appeared on the federal government's first list of endangered species. Concern turned to crisis in 1985, when six of the wild birds, which by that time were closely monitored, suddenly disappeared. Others were found dead of lead or cyanide poisoning, or from hunters' bullets.

The recovery strategy is elaborate and has cost more than \$10 million. The captive breeding at the two zoos has been much more successful than expected. In all, 25 chicks have been hatched since 1988, with all but one surviving.

Normally, a female condor lays one egg a year, but scientists found that breeding could be accelerated by removing the egg from the nest just after it was laid, inducing the mother to lay another.

Mr. Kiff said a central concern was preserving a full genetic pool so as to prevent inbreeding. Therefore, the two chicks selected for release have at least five siblings each from the same parents, and the siblings will be kept in the zoo as a genetic hedge in the event the two released chicks die.

In a few weeks, the chicks will be taken to the Sespe Condor Sanctuary, a 35,000-acre (14,160-hectare) tract owned by the U.S. Forest Service in the rugged mountains of central Ventura County.

When they are about 3 months old, the two chicks will be placed on "hack" towers, large platforms mounted on telephone poles. A protective net will confine and protect them for a few months. Contaminant-free food, in the form of stillborn calves, will be provided by biologists. The birds seem to grow up better in groups, so a few Andean condor chicks will be put into the wild at the same time.

The netting will be removed in December or January, "We're using the Montessori approach - we'll let them go when they want," said Mr. Kiff, who is curator of Ornithology at the Los Angeles County Museum of Natural History and director of the Western Foundation of Vertebrate Zoology.

To protect them after release, scientists will monitor the two birds with radio tracking devices and return them to Sespe should they wander too far. Shooting a condor is a federal felony that can bring a fine of up to \$20,000 and two

years in jail. But the bigger fear is that the birds might consume carrion tainted with pesticides or lead pellets from hunters.

Courtesy: International Herald Tribune 3-4 August 1991

CORRESPONDENCE

THE RANN OF KUTCH IN PAKISTAN. INAYAT CHAUDHRY, WWF-Pak, 766 Shadman I Lahore, Pakistan

This is with reference to M.K. Himmatsinhji's article titled "The Flamingo City in the Rann of Kutch" (May-June issue of Newsletter for Birdwatchers). According to my information, flamingos also breed on this side of the border. Last year WWF-Pak had initiated a proposal to declare this area as a National park. Funds were allocated in 1990 for survey of fauna, flora, water, creeks, boundaries, human settlements and activities, and breeding/wintering areas of the birds. However, the survey had to be deferred due to a variety of reasons. Hopefully the survey will be undertaken as soon as possible. I am writing this to assure Himmatsinhji and other conservationists that we are seized with the problem and are seriously concerned to preserve the fragile ecosystem of Rann of Kutch. We also wish to extend you our full cooperation for this noble cause.

SIGHTING OF THE SIBERIAN CRANE IN THE LITTLE RANN OF KUTCH. DHANRAJ MALIK, 1, Kinner Apartment, Opp. Vijay Park, Navarangpura, Ahmedabad 380 009

While watching a flock of cranes in the little Rann of Kutch which mostly consisted of the Great Eastern or Common Crane *Grus grus* and a few Demoiselle Cranes *Anthropoides virgo*, I saw a bird which was larger than the Common Crane standing next to it and as I could see it from my 10X binoculars it was white in colour. But I thought that it looked so because of the rays of the sun which were coming from behind, and were quite low as it was 4.30 pm. But only to confirm that it was the light responsible for the white colour, I walked a few yards and again saw the bird, but it still looked white in colour. Hence I took out my 60X scope and watched it, and what did I see but that the bird was not only white but it also had a red face. Immediately I recognised the bird as a Siberian Crane *Grus leucogeranus* as I had seen 6 in Bharatpur in 1988. But I was still not sure of the sighting, so I made the flock fly, and the white bird did have the black primaries that a Siberian Crane should have. Hence it was confirmed that it was a Siberian Crane.

This sighting was then confirmed by 4 English people who were with me and who had just come from Bharatpur

only 2 days ago, and had seen 8 Siberian Cranes. As the bird was far away I could not take a photograph. I hope this sighting is accepted by you and published in the journal as soon as possible.

CASES OF ALBINISM IN HOUSE AND JUNGLE CROWS. ANIL MAHABAL, *Zoological Survey of India, High Altitude Zoology Field Station, Solan (H.P.) 173 212*

During March 1990, I undertook an avifaunal survey of Mandi district of Himachal Pradesh. I was camping in Mandi which is a little town situated on the river Beas at an altitude of 850 m. One day when I was watching the birds, I observed a creamy white albino crow sitting on an electric pole near the Irrigation Office on Mandi - Rewalsar Road. When I looked through the binocular I could identify it as a Himalayan Jungle Crow, *Corvus macrohynchos intermedius* Adams.

I was watching this albino crow for a long time. It was in the company of 10-12 other Himalayan jungle crows. The behaviour of this bird was quite normal, except that it was not very active. This albino crow was apparently much heavier than the others. Its beak was also paler in colour. It is interesting to note that in Mandi town I could observe only Jungle Crows, there were no House Crows at all. Again on 23 April 1991 when I camped in Mandi on the way to Manali, I could see this albino crow once again possibly the same one, in the same area.

This is the second sighting of a pure albino Jungle Crow from Himachal Pradesh. Earlier it was reported from Bilaspur town of Himachal Pradesh during 1984-85 [NLBW, 27 (9/10), 1987]. There is also one pure white Jungle Crow in the collection of BNHS, Bombay. When I was working in the Zoological Survey of India, Western Regional Station, Pune I have collected one brown variety of crow from Uralikanchan area of Pune district sometime in 1984. I have identified this as Indian Jungle Crow. Similarly a golden brown Jungle Crow has also been reported in Hazaribagh, Bihar in 1987 [NLBW, 28 (5/6), 1988].

Besides these cases of albinism in Jungle Crows, there are cases of brown variety of House Crow *Corvus splendens* reported from Calcutta in 1906 [JBNHS, 17 (2): 519] and another brown and white House Crow from Bombay in 1906 [JBNHS, 17 (2): 519]. There is also a record of complete albino House Crow from Orissa (Prakruti Utkal Univ. J. Sci., 10, 1973) and one more from Jasdan, Kutch [NLBW, 213 (11/12), 1983].

Recently, Narang [NLBW, 31 (1/2), 1991] has reported Himalayan Crows, *Corvus macrohynchos intermedius* with white shoulder patch on their wings (secondaries), in good

numbers in a village 100 km from Solan in Himachal Pradesh. His contention was that it does not appear to be a case of albinism. However, when I was studying the population and roosting behaviour of Indian Mynas, House and Jungle Crows in Pune City during 1974-80, I came across a fairly good number of House Crows with white patches either on their wings or on the tail feathers. To me it appears to be the case of partial albinism. It is interesting to note that such cases of partial albinism were not observed in the population of Jungle Crows in Pune City.

On the whole it can be said that partial albinism is not an uncommon phenomenon in crows, but total albinism seems to be rare.

AN APPEAL. DR KUMAR GHORPADE, P.O.Box 2564, 123, Brigade Road, Bangalore 560 025, India

Those birdwatchers and professional ornithologists in India who wish to be listed in my forthcoming book: "INDIAN BIRDWATCHERS DIRECTORY & GUIDE" may please write to me, with their present address mentioned (give PIN CODE), so a questionnaire can be mailed to them. This applies also to persons who have not been sent a revised questionnaire after 1988. Please inform your other birdwatcher colleagues also or send me their names and addresses as well. Last date for receipt of completed questionnaires is now November 10, 1991, so please hurry!

DISASTER AT RANGANTHITTU. V.GANAPATHI, Staff Reporter, The HINDU, Thanjavur 613007

It was shocking that the overflowing waters of the Cauvery completely submerged the most important sanctuary in South India, Ranganthittu, on the fateful night of July 28, 1991 (as reported in the rear cover page of your issue July-Aug). If only they had released water gradually early enough, the bird sanctuary and thousands of nests of ibises, darters, shags, spoonbills, cormorants would have been saved.

GREAT HORNBILLS NEAR DANDELI. C.S.NAGENDRAN, 21, Hardi Compound, 5th Cross, Narayanpur, Dharwad 570 008

During January this year I had been to Dandeli and camped at Kulgi. In a Ficus tree I was able to count 50 Hornbills belonging to two species viz. Great Hornbill *Buceros bicornis* and Malabar Grey Hornbill *Tockus griseus*. They were feeding on the Ficus berries. Their flight was fascinating.

Kulgi is 14 km before Ambikanagar on Dharwad - Dandeli Road. There is a British Bungalow and a forest guest house. This is the best place for observing the Great Hornbill and the Malabar Grey Hornbill. The flight of the Great Hornbill is just like that of a vulture. The bird takes off with a slow *tuff tuff tuff* noise. If any of the readers are interested they can write to me for further details about Kulgi.

Last month I and my friend Mr Ashok Mansoor located a nest of the Common Grey Hornbill *Tokus birostris* and established our base to photograph it. But even the best camouflage disturbed it. In fact we established a hideout on a tree top opposite to the nest, while the female was inside the plastered nest. The feeding hat of the male is like a magician removing eggs from the basket. The male used to feed the female with berries. With great difficulty we could snap one shot but the male Hornbill, flew away hearing the noise of the shutter. Next day my friend broke his leg and could not climb into the hide. Fearing that the male might abandon the female and the nest, we cancelled our adventure.

HOUSE SPARROW IN UNUSUAL PLUMAGE. KUMARAN SATHASIVAM, 20 Jadamuni Koil Street, Madurai 625 001

Between the 23 and 26 of July, a male House Sparrow visited my house a few times. It came either singly or with a female sparrow. It used to look for food or have a bath in water overflowing from the tank or simply perch in the shade.

What was unusual about the sparrow was its plumage. It had a white forehead, not the usual grey, and it had a large white spot at the base of its tail. In addition, the white patches on the wings were more prominent than is normal. Those white markings gave the sparrow a very striking look. The female sparrow which sometimes accompanied it was quite normal in appearance. On one occasion there was another, normal male sparrow near the 'white' bird. I did not notice either bird behaving aggressively towards the other.

Have there been any other records of sparrows with unusual plumage of this kind?

NESTING OF GOLDEN ORIOLE AND PRESENCE OF CRESTED BUNTING IN PALI-UDAIPUR BORDER FOREST OF RAJASTHAN. JUGAL KISHORE TIWARI, Field Biologist, Bird Migration Study Project, Bombay Natural History Society

On 15 June 1991, I was on a birdwatching trip at Parsuram Mahadeo, a border forest of Pali-Udaipur

districts. The Aravali hills start from here, a lush green dry deciduous forest. I found a golden oriole *Oriolus oriolus kundoo* nest on a tall tree. The nest was located on the outer branch of the tree. A pair of golden orioles, were seen near the nest. I took a photograph of the nest.

Ali (1983) mentions that a small population of golden orioles breeds in Rajasthan, but which parts of Rajasthan is not specified. According to Dr Azeez (personal communication) golden orioles breed in Bharatpur. He found a nest outside the Keola Deo National park in Aghapur village in the month of May. Apart from Bharatpur and the present sighting in Parsuram Mahadeo (Pali) where else does the golden oriole breed in Rajasthan?

I also happened to see two pairs of Crested Buntings *Melophus lathami*. This is a common species around Mount Abu, but has not been reported from this area.

EFFECTS OF ORGANOPHOSPHORUS AND ORGANOCHLORINE PREPARATIONS ON BIRDS. RAJIV SAXENA, Hanuman Nagar, Phalka Bazar, Gwalior 474 009 (MP)

S N Naik [JBNS, 86 : 241-242] found 10 Demoiselle Cranes, 1 Kite and 1 Marsh harrier dead at Veer Dam near Pune on 5.3.1987, and attributed the death to the possible ingestion of poison or pesticide. But no tests were done to detect any evidence of organophosphorus pesticides. Earlier Rajiv Saxena [Hornbill - 1986 (4) : 10] had reported the death of over 100 peafowl after the birds had taken their last meal in a farm which was sprinkled with pesticides. Similarly Rajiv Saxena [NLBW, 31 : (3&4) : 8] found 5 Demoiselle Cranes and 4 Barheaded Geese dead in Madhav National Park.

Organophosphorus Compounds are insecticides used for the treatment of ectoparasites of animals and birds. These compounds are highly toxic and readily absorbed by ingestion, inhalation, and by other means.

Organochlorines are the chlorinated hydrocarbons (insecticides) like D.D.T., Benzene hexachloride, Aldrin, etc. There is not much literature available on the tolerance limit in birds. LN Achariyo (per. com.) cites two examples. One pheasant *Phasianus colchinus* that had received D.D.T. at 1:1000 ratio exhibited typical tremor before death. Another bird exposed to the same ratio died on 23rd day after exposure.

I would like some feedback on this note. Readers may please respond if they have come across such incidents specially in those birds that feed in cultivated fields.

HOSTING BIRDWATCHERS. RAVI SAXENA, MIG-853, Darpan Colony, Thatipur, Morar, Gwalior 474 011 (MP) and PRADEEP SHRIVASTAVA, C/o DR.N.K.Shrivastava, 4/37, "Matra Chaya", Nai Sarak, Gwalior 474001 (MP)

This refers to your editorial which appeared in NLW, 31 (7&8). We, have been watching the birds in North Madhya Pradesh for last ten years. Although we have visited many other places in India, six districts of two divisions - Gwalior and Chambal - of North MP are frequently visited by us. This area has one National park (Madhav N.P.) and four sanctuaries (National Chambal Sanctuary, Kuno-Palpur Sanctuary, Ghatigaon Sanctuary and Karera Bustard Sanctuary).

In Gwalior, we can provide simple accommodation and arrange for journey to any of these places. We can also accompany the visitors if sufficient advance notice is given. Other kinds of facilities like the use of our binoculars, telescope and guide books can be considered.

Our addresses are given above.

**9th INTERNATIONAL
WATERFOWL ECOLOGY
SYMPOSIUM**

HAJDUSZOBOSZLO

HUNGARY

5-11 September 1992

HOSTING BIRDWATCHERS BY MR ANWAR KHAN BABI

In response to Mr Theodore Baskaran's, suggestion for starting a column about persons desirous of hosting Birdwatchers, Mr Anwar Khan Babi of Little Rann of Kutch welcomes Birdwatchers in groups of 15-20-30-35 to visit Little Rann of Kutch (Dhangadhra Sanctuary) to watch Desert birds, including Houbora Bustard, Indian Sandgrouse, Grey Partridge, Peafowl, Common Crane, Demoiselle Crane, Flamingo and animals such as Wild Ass, Black Buck, Chinkara, Dessert Fox, Dessert Hare and Indian Wolf during the winter months (Dec-Mar).

Mr Babi can arrange for stay and travel by jeep to all places of interest, and also to Gir forest. The cost per person per day works out to Rs.250/- including stay, food and jeep travel from Viramgaum or Jamnagar. Birdwatchers are welcome to write to him at No. 21, Saradarnagar Society, Junagadh 362 001, Gujarat

**WATERFOWL AND
WETLAND CONSERVATION
IN THE 1990s**

- a global perspective -

12 - 19 November 1992

FLORIDA, USA

**at the invitation of the
United States Fish and Wildlife Service**

For further information please contact

Simon Nash, IWRB, Slimbridge, Gloucester, GL2 7BX, UK.

Cover : Purplerumped Sunbird (*Nectarinia zeylonica*) renders a delightful song *tityou.....tityou tit....tit...*, as it excitedly opens and closes its wings and tail and pivots from side to side. Particularly fond of nectar of the Drumstick and Hybiscus flowers. It sucks out the nectar with its long tubular tongue.

Photo : S. Sridhar, ARPS

Editor : ZAFAR FUTEHALLY, 'Moitaka', Bear Shola Road, Kodaikanal 624 101

Printed and published by S. Sridhar at Navbharath Enterprises, Seshadripuram, Bangalore 560 020, for Private Circulation only

(Contd. from front inside cover)

We hope that all counters and National Coordinators who have not yet paid attention to these points will be willing to cooperate. This is just as important as the fieldwork, since it allows the best to be made of the data collected.

Analysis of Data

The Asian Waterfowl Census has so far enabled the collection of data in over 30 countries. The data has been compiled regularly for the annual reports, in the shape of tables showing total numbers of waterfowl per wetland and per species for each country. However, these tables are simply an intermediary stage, and definitely not the final result of the census.

From the initial set of 5 years of data (1987-1991), real analyses have now been initiated, with the aim of producing distribution maps, population estimates and trends for some species, lists of wetlands of international importance for particular species.

Initial results will be presented at the conference to be held in Karachi in December 1991, organized by IWRB together with the National Council for the Conservation of Wildlife (Pakistan) and Asian Wetland Bureau. The complete analysis will be carried out in 1992, and will result in an IWRB Special Publication.

As a first step, and in order to show to all the dedicated volunteers what can be the result of their work, we have included in this report a preliminary analysis on a particularly "easy" species, whose distribution in Asia is mainly restricted to North-west India, the Demoiselle Crane *Anthropoides virgo*.

Please refer to the national report for India. As you can see, just the first 5 years of census can already provide us an insight into the factors influencing waterbird distribution in Asia. In 1992, we hope to produce similarly interesting results for many more species and wetlands throughout Asia.

Coverage in INDIA

Waterfowl counts have been carried out in India under the coordination of the Bombay Natural History Society and the Ecological Society since the launching of the AWC in 1987. In 1991, 816 wetlands were covered by over 300 participants, with the largest contributing states being again in the north-west (Gujarat : 204 wetlands; Maharashtra : 66) and the south (Karnataka : 192; Tamil Nadu : 174). After a gap in 1990, a thorough survey of the large and very important tanks of the Coromandel Coast (coastal Tamil Nadu) was carried again, thanks to V. Shantharam and friends at Madras Naturalists Society, while the Wildlife Association of Ramnad District (south Tamil Nadu) carried out another of their thorough surveys. A detailed survey of the important Kaziranga N.P., Assam, was

coordinated by M. Raj, while in Karnataka, the excellent collaboration between NGOs (Bangalore Birdwatchers Field Club) and the Forest Department continued; this is indeed a model which we would like to see extended to other states.

In these areas with many tanks and a lot of enthusiasm, the best results in the future can be expected if, building on these first few years, counters now decide on a sample of tanks (e.g. 50) to be covered every year, even when they are dry or have no birds.

However, it must be noted that in India in general, many of the sites (over 320) counted in 1991 are new ones, whereas many of those counted in the past 4 years (over 700) have not been counted again. This is going to prove a major drawback to calculate trends (see the Introduction), which is unfortunate due to the extreme importance of India for many species.

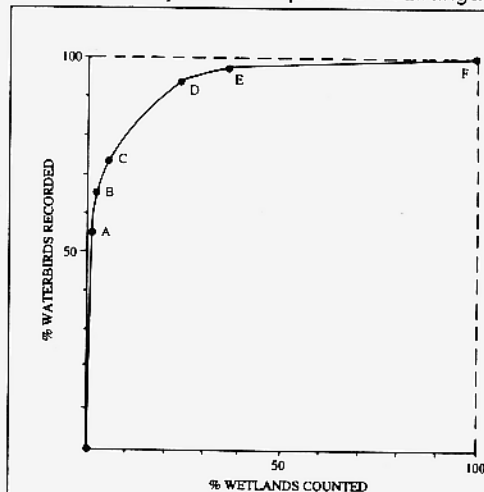
In 1991, the counts were again coordinated by S.A. Hussain of the Bombay Natural History Society and Prakash Gole, of the Ecological Society, Pune.

Only 8 Siberian Cranes wintered in Bharatpur, an all-time low for this tiny population whose Iranian wintering grounds also no longer seem safe (see this country). One more was reported in the little Rann of Kachchh in January. (*Newsletter for Birdwatchers* 31 (1 & 2):13), but this was not officially recorded for the AWC. Could part of the population have discovered new wintering grounds within India? The number of the endangered Spot-billed Pelican remained low at 1400, with major concentrations recorded at the colonies of Chitrangudi (T.N., 286) and Nelapattu (A.P., 560).

After many years of unreported breeding, Greater Flamingos were found again nesting in the Great Rann of Kuchchh, from where 50,000 were reported. At 46,000, the population of Demoiselle Cranes remained very similar to the previous 3 years, with the bulk of the birds in Gujarat suggesting that the wetlands there were in very good condition (see Special Feature). The endangered Bar-headed Goose (12,000) also remained fairly stable, with the main concentrations found in Assam. A total of only 17 Greater Adjutants were seen, although a flock of 38 was later reported in late March from Kaziranga N.P. Over 4550 Ferruginous Ducks, mainly in Assam, are a further pointer to the probably very high importance of Assam for the conservation of many endangered waterfowl. Alarming few Indian Skimmers (18) and Black-bellied Terns (75) were seen, a further hint to their fast decline in India.

It is now clear that after the first 5-years of the AWC in which the emphasis had to be laid on increasing the coverage, the goal for future years should be to try and count REGULARLY the same wetlands rather than counting different ones every year. This does not necessarily mean counting every year all the 1,600+ wetlands recorded so far; just a selection of the most important of these can be sufficient to record most of the waterbirds in India.

For example, we present here a summary of the count in 1991 (see graph). It shows that the 10 wetlands having over 20,000 waterbirds altogether held 54% of the total number of waterfowl recorded in India; similarly, 24% of the wetlands (196, i.e. those having over 1000 birds) accounted for 92% of the Indian total. Clearly, this shows that a carefully chosen selection of Indian wetlands can adequately represent the country. Of course, this will have to take into account the first 5 years of data, since some important sites had few birds in 1991 because they were dry. IWRB hopes in the next months to analyse broadly the Indian data in order to arrive at proposals on which sites need regular counting for the future Asian Waterfowl Censuses in India.



- A : 10 wetlands (over 20,000 waterfowl each)
- B : 23 wetlands (over 10,000 waterfowl each)
- C : 44 wetlands (over 5,000 waterfowl each)
- D : 196 wetlands (over 1,000 waterfowl each)
- E : 303 wetlands (over 500 waterfowl each)
- F : All (816) wetlands counted

Distribution of the Demoiselle Crane in India

**Report compiled by
Christian Perennou & Taej Mundkur,
published by IWRB, Slimbridge, U.K.**

The winter distribution of the Demoiselle Crane is fairly restricted in Asia. Virtually all the birds are reported every year from India, with only occasional records from Iran and China, up to 53 birds reported from Pakistan (1987) and 550 from Nepal (1987). India, the numbers counted during the AWC have been fairly consistent (37,000-46,000) since a good coverage was first achieved in 1988.

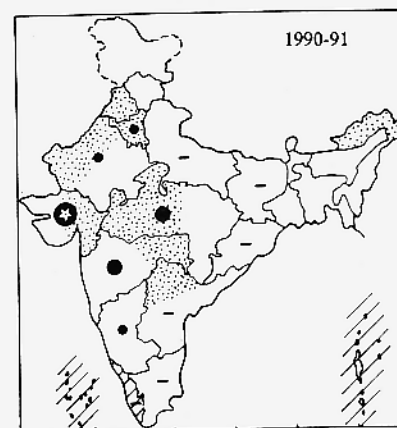
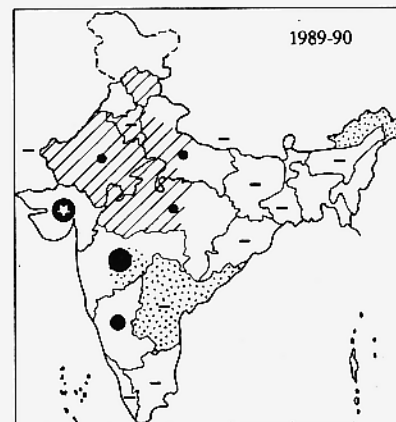
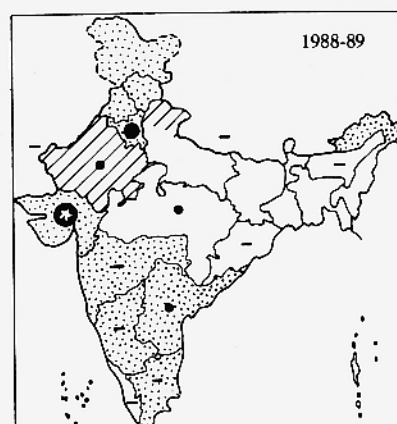
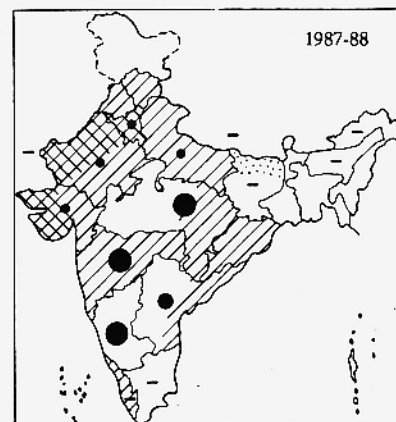
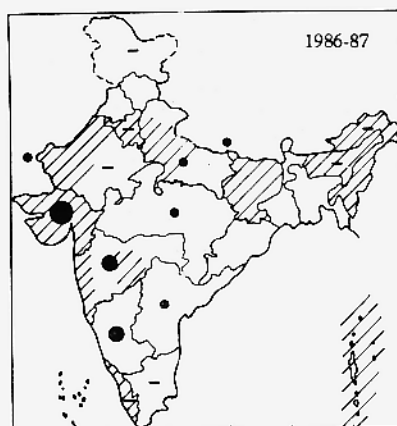
As can be seen from the maps, the distribution varies much from year to year. It has long been suspected or known by local ornithologists that this depends on the rainfall; but for the first time the AWC allows us to demonstrate it by plotting both the distribution of the cranes and the amount of rain received in the previous monsoon (June to September, as per *The Hindu* Weather Reports, courtesy of Dr Meher-Homji, French Institute, Pondicherry).

The maps suggest the following pattern.

Following a bountiful monsoon in at least part of the state of Gujarat (1988-89 and 1990-91), the Demoiselle Cranes are highly concentrated (85-95%) there in January. Despite an equally good monsoon in states further south and east, very few birds winter there. An average monsoon (1989-90) or a moderate drought (1986-87) in Gujarat prompts important numbers of cranes to winter further east and south in Maharashtra and Karnataka; but Gujarat still retains its status of main wintering area. Finally, a very severe drought in Gujarat (1987-88) chases virtually all the cranes away, forcing them to winter in the above states and even further (Madhya Pradesh, Andhra Pradesh), in places with a normal monsoon or affected by only a moderate drought.

It therefore appears that while Gujarat is the core wintering area for the species in Asia, the states of Maharashtra and Karnataka are important, complementary areas, while Madhya Pradesh and Andhra Pradesh are critical refuges in cases of severe droughts. It also appears that following a very severe drought in Gujarat (1987-88), a bountiful monsoon brings wintering cranes back immediately (1988-89), without the "remanence" effect which has been shown in Europe with ducks following cold waves.

This example shows how the work of hundreds of AWC participants enhances the understanding of waterfowl distribution in Asia; this analysis is a tribute to their dedicated fieldwork.



DEMOISELLE CRANES IN THE INDIAN SUBCONTINENT

NUMBER OF CRANES

- | | |
|---|--|
| <ul style="list-style-type: none"> ★ > 20,000 ● 6000-20,000 ● 1000-6000 | <ul style="list-style-type: none"> ● 1-1000 - None |
|---|--|

MONSOON IN THE PREVIOUS YEAR

- Excess (120% of average)
- Normal (80-120% of average)
- Drought (40-80% average)
- Severe drought (40% average)

